

Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) EP 1 036 940 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
10.01.2001 Bulletin 2001/02

(51) Int. Cl.⁷: F04B 27/18, F04B 49/22

(43) Date of publication A2:
20.09.2000 Bulletin 2000/38

(21) Application number: 00105726.4

(22) Date of filing: 17.03.2000

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

- Murase, Muneharu,
K.K.Toyoda Jidoshokki Seisakusho
Kariya-shi, Aichi-ken (JP)
- Fukanuma, Tetsuhiko,
K.K. Toyoda Jidoshokki
Kariya-shi, Aichi-ken (JP)
- Ohyama, Katsuya,
K.K.Toyoda Jidoshokki Seisakusho
Kariya-shi, Aichi-ken (JP)

(30) Priority: 18.03.1999 JP 7366299

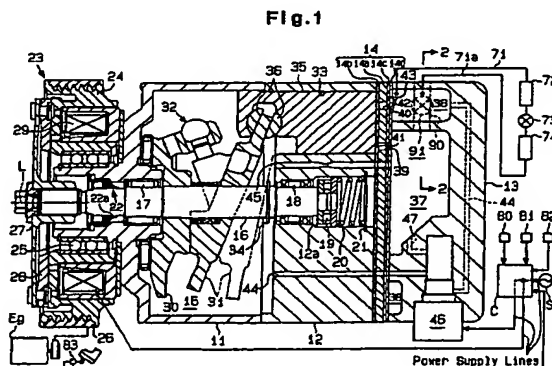
(71) Applicant:
Kabushiki Kaisha
Toyoda Jidoshokki Seisakusho
Aichi-ken (JP)

(74) Representative:
Leson, Thomas Johannes Alois, Dipl.-Ing. et al
Patentanwälte
Tiedtke-Bühling-Kinne & Partner,
Bavariaring 4
80336 München (DE)

(72) Inventors:
• Ota, Masaki,
K. K. Toyoda Jidoshokki Seisakusho
Kariya-shi, Aichi-ken (JP)

(54) Variable displacement compressor

(57) In a variable displacement compressor that draws, compresses, and discharges refrigerant gas, the displacement is adjusted by varying the inclination of a cam plate in accordance with the difference between the pressure in a crank chamber and the pressure in cylinder bores. A pressurizing passage connects the crank chamber to a discharge passage. A bleed passage connects the crank chamber to a suction chamber. A displacement control valve is externally controlled and varies the pressure in the crank chamber by adjusting the opening size of either the pressurizing passage or the bleed passage. A suction control valve closes a duct between the suction chamber and an evaporator when the pressure in the crank chamber exceeds a predetermined level to prevent an excessively high pressure in the crank chamber.



EP 1 036 940 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 10 5726

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	US 5 173 032 A (TAGUCHI TATSUHISA ET AL) 22 December 1992 (1992-12-22) * column 2, line 45 - line 62 * * column 4, line 14 - column 6, line 24; figures 1-3 *	1	F04B27/18 F04B49/22
A	EP 0 845 593 A (SANDEN CORP) 3 June 1998 (1998-06-03) * column 10, line 1 - column 17, line 23; figures 1-4 *	1	
A	EP 0 707 182 A (TOYODA AUTOMATIC LOOM WORKS) 17 April 1996 (1996-04-17) * column 5, line 23 - column 9, line 53; figures 1,4-7 *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			F04B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 22 November 2000	Examiner Ingelbrecht, P
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03.82 (P04C01)